

Abstract

A diagnostic method and device for use in detecting or quantitating an analyte present in a liquid sample. The method includes reacting an analyte-containing sample with reagents capable of generating a first coil-forming peptide in solution form. This peptide is then contacted with a biosensor whose detection surface has surface-bound molecules of a second, oppositely charged coil-forming peptide, under conditions effective to form a stable  $\alpha$ -helical coiled-coil heterodimer on the detection surface. The formation of the coiled-coil heterodimer produces a measurable change in biosensor signal, which is measured to detect the presence of or quantitate the amount of analyte in a sample. Also disclosed is a biosensor device for carrying out the reaction.

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